

THE GREAT HEATH

1. Character of the Landbase

The publicly owned portion of the Great Heath (5,837 acres) is located entirely within T18 MD in Washington County. The system of bogs and wetlands that comprises the 7,000-acre peatland complex (or heath) also extends onto privately owned lands in the Town of Columbia.

The most of the publicly-owned lands came to the State through tax delinquency in 1933, as recorded in the State Archives in Augusta. A 128-acre parcel in the east-central portion of the property is what remains of the original reservation lands (minister, ministry, and school lots) in the township; the remainder of which were conveyed in a land exchange with Down East Timberlands Division (Pejepscot Paper Co., 1988) for a 2,662-acre parcel.



In addition to the fee lands, the Bureau acquired an 88-acre Conservation Easement from Cherryfield Foods along the southeastern boundary of the Heath. Cherryfield Foods, as part of a cranberry project proposal (with the Department of Environmental Protection and the Land Use Regulation Commission), donated this easement in 1998.

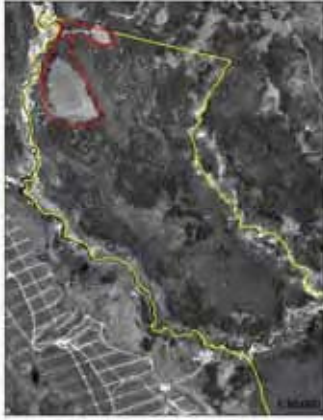
A blueberry barren on Crebo Flat on the north side of the property is commercially managed by Cherryfield Foods, who retained deeded rights to this portion of the property for management of the berries.

2. Resources and Management Issues

NATURAL AND GEOLOGICAL RESOURCES

One of the largest peatland systems in Maine, the Great Heath is an impressive and vast collection of different peatland types that grade into one another. For this reason, the entirety of the state-owned portion of the Heath was designated as an Ecological Reserve in 2000. It is an excellent example of a domed bog ecosystem; supporting an intact array of peatland types that form distinct raised domes, some with secondary pools (small, shallow depressions with standing surface water within the bog). Both the quality and the quantity of peatland types in the Great Heath Unit led to its designation. However, the 40-acre blueberry barren on Crebo Flat on the north side of the property (pictured right and below), with its deeded blueberry rights owned by Cherryfield Foods, was also included as part of the Reserve.





The various types of bogs and fens within the Great Heath have been described and mapped by a number of researchers -- most thoroughly by Davis and Anderson in 1987. The sheep laurel - dwarf shrub bogs in the northeast and central areas of the property are notable for their hummocks and hollows. Both areas contain sparse, small black spruce, larch, and/or white pine. In wetter areas, the sheep laurel-dwarf shrub bog in the northeast grades into an area of leatherleaf boggy fen. This area has scattered larch and black spruce and is bordered by a northern white cedar woodland fen. The southeast portion of the Great Heath supports a huckleberry-crowberry bog with secondary pools. This huckleberry-crowberry bog peatland type is uncommon (ranked S3) in Maine and typically restricted to the cool climate of the Downeast coast. A second

huckleberry-crowberry bog is in the northeast quadrant of the Great Heath, and a third is in the northwest portion. A bluejoint meadow grassland occurs at the confluence of the Pleasant River and Taylor Branch. Though bluejoint grass is dominant, tussock sedge is also prominent on the silty floodplain soils. Beaver activity is frequent throughout the lengths of the Pleasant River and Taylor Branch within the Heath, altering streamside vegetation and creating obstacles for canoe passage.

Geologically, the Great Heath Unit is underlain by granite bedrock but is probably more influenced by its surficial geology. The Unit borders Pineo Ridge, an area famous for its glaciomarine delta deposits. Coarse sand and gravel were deposited on top of marine silts and clays as the last glacial advance melted and sediment washed into the ocean about 12,700 years ago. Most of the coarse sediment areas are now cultivated blueberry barrens, while the silts and clays most likely form a relatively impermeable layer under the bog. An average of three meters of peat now sits atop the marine clays and silts, and some areas of the Great Heath have accumulated eight meters of peat.

Several rare plants are known to the Unit. Wiegand's sedge was found along the northeast edge, in the woods that border the bog. Bog bedstraw grows near the confluence of the Pleasant River and Taylor Branch. Maine's only population of Jacob's ladder, a globally rare plant, grows in the southeast portion of the Unit. One dragonfly of special concern, the war-paint emerald, has been found in the Great Heath and several other peat bogs in Maine, although it may be under-surveyed.

The Natural Resource Inventory for the Great Heath conducted in 2003 includes a revision of the original inventory from 1982.

Summary of Natural and Geological Resource Management Issues

- The commercially managed Crebo Flat blueberry barren is within the Ecological Reserve area; its current deeded use for commercial purposes is not consistent with ecological reserve management guidelines.

HISTORIC AND CULTURAL RESOURCES

The historic/cultural resources on the Great Heath Unit constitute a blend of past land use activities that contribute to the unique character of the Downeast region. These uses may include the presence of Native Americans (though archaeological study has yet to be undertaken), logging, and recreation.

Nomenclature

Bill Smith Brook, Fred Dorr Brook, and Taylor Brook on the northeast side of the Unit were named individuals who logged and had camps in the area. Crebo Flat on the northwest section of the Unit was named for a lumberman in the area. The Ingersoll Branch of the Pleasant River on Crebo Flat was named for a 1798 settler.

Cultural Resources

No significant archaeological studies have been conducted on the Great Heath Unit; however the navigability by canoe of the Pleasant River and its access from other waterways makes it a likely source of archaeological resources from Native American periods.

FISHERIES AND WILDLIFE RESOURCES

The Great Heath is an aggregation of significant natural wetland communities. Because the state lands within the Heath abuts the Pleasant River for more than seven miles, these wetland communities function to store water during wet periods and provide water discharge directly to the river during dry periods. The Pleasant River is one of seven Atlantic salmon rivers in Maine (net at right used during periodic counts) and may be impacted by water withdrawals for irrigation and by pesticides used for adjacent commercial blueberry and cranberry production. The Department of Conservation, Bureau of Geology and Natural Areas is a lead agency in implementing a Water Use Management Plan for this river. This plan is a non-regulatory effort to work with water users to modify irrigation practices and minimize potential impacts on in-stream flows.



Species with wetland habitat preferences are common to the Great Heath. These include Wilson's snipe, American bittern, green heron, and great blue heron. Mammals including beaver, muskrat, mink, and otter find suitable habitat here. Beaver dams are an ongoing concern, as they at times impede fish passage for salmon and other species, and add considerable woody debris to the stream.

Summary of Fisheries and Wildlife Management Issues

- The Pleasant River supports a natural population of Atlantic salmon; management activities occurring on the Unit will need to be evaluated relative to its potential impact on the fishery, particularly in regards to the numerous beaver dams along the river.
- Irrigation withdrawals present a risk to the habitat associated with the Heath; there is a need to work with adjacent landowners and appropriate state and federal agencies to minimize the impact of this activity.

RECREATION AND VISUAL RESOURCES

Recreation consists primarily of canoeing and fishing on the Pleasant River, with access to the river occurring on private lands north and south of the Unit. The road system within the Crebo Flat area on the north side provides access for hunting. Canoeing within the 9-10 mile stretch of river within the Unit is difficult due to numerous beaver dams along the way, and fluctuations in the river course due to changing water levels. Some camping occurs along the river, particularly in the area known as Clay Banks (pictured right) located about a one-hour paddle from the Columbia town line to the south. These campsites are quite primitive, and have been in place for a considerable time. One area about mid course of the river was thought to hold potential as a campsite



Summary of Recreation Management Issues

- No facilities for hand carry boat launching area available on the Unit.
- Water access campsites along the Pleasant River need to be reevaluated to determine if they meet the current demand access their condition.

TIMBER AND RENEWABLE RESOURCES

As there have never been regulated acres on this Unit, no timber inventory information is available. Un-detailed maps found in the 1982 policy statement for Great Heath indicated about 20% of the Unit's 5,681 acres being in upland forest isolated by wetlands, and another 20% in forested wetlands; with the remainder in primarily wetland. The forested areas are likely dominated by softwood species; including spruce, cedar, tamarack, and fir - with red maple and white birch common enough on some upland acres to warrant their typing as mixedwood. Most of this forest is relatively young and/or of small stem size; the forested wetlands will probably always hold smaller trees. Given the Ecological Reserve designation, some of the upland acres will eventually progress to late-successional forest, a scarce habitat type in this area of predominantly wetlands and blueberry barrens.

TRANSPORTATION AND ADMINISTRATIVE CONSIDERATIONS

Public Use and Management Roads, Gates and Road Control

Access to the Great Heath is entirely on private lands. The Bureau otherwise does not actively manage any roads or gates anywhere on the property. The abutting landowner has been known to temporarily post roads as off limits to the general public (including the Crebo Flat barren).during harvesting of blueberries

Leases

Although no leases occur on the property, a camplot along the river located within a short distance of the Columbia town line has been in existence since before state ownership. The

camp is set back at least 100 yards from the river, and receives occasional use. An agreement regarding its continuation will need to be finalized.

Fire Control

The Bureau's Integrated Resource Policy states "Wildfires occurring on or spreading to Bureau lands will be controlled." (pages 12-17). The Bureau will continue to coordinate with the Maine Forest Service in planning for the prevention and control of forest fires on the lands that it manages. Such efforts will be undertaken on a regional basis, to ensure Bureau staff can respond adequately and quickly to fire emergencies.

3. Resource Allocations and Management Objectives (see map GH-1)

Special Protection as a Dominant Use. The entirety of the state's ownership on the Great Heath is currently designated as an Ecological Reserve; however, the blueberry barren in Crebo Flat should be removed from this designation, as it is commercially managed.

Secondary Uses Within Special Protection Areas. Wildlife management and recreation (primarily canoeing along the Pleasant River) are important secondary uses within the Great Heath.

Special Protection Management Recommendations

- Monitor recreational use within the Ecological Reserve for potential conflicts with the values and resources being protected.
- Remove the Ecological Reserve designation from the 40- blueberry barren on the northwest corner of the property (Crebo Flat), where commercial blueberry management is permitted by deed. Encourage utilizing organic management techniques to minimize impact to the abutting Ecological Reserve.

Historic and Cultural Management as Dominant Use.

Not applicable

Wildlife Management as a Dominant Use. N/A

Wildlife Management as a Secondary Use. Wildlife management will be an important secondary consideration throughout the Great Heath, as a variety of wildlife species, including Atlantic salmon, are dependant on habitat provided by the heath complex. Management will also include monitoring of the commercial activity on the Crebo Flat blueberry barren, and its potential impacts to water quality along the nearby Pleasant River.

Fisheries and Wildlife Management Recommendations

- Monitor the impact of beaver dams on the Pleasant River on the Atlantic Salmon fishery.
- Monitor the commercial blueberry activity in Crebo Flat for potential impacts to water quality in the Pleasant River.

Recreation as a Dominant Use. N/A

Recreation as a Secondary Use. Remote Recreation has been allocated as a secondary use along the Pleasant River. Activities within this allocation include canoeing, camping, and fishing. Hunting and trapping are considered allowable secondary uses throughout the Unit.

Recreation Management Recommendations

- Monitor camping activity on the Pleasant River, and evaluate need for upgrades to the existing sites at Clay Banks, along with need for an additional site.

Timber Management as a Dominant Use. N/A

Transportation and Administrative Management Recommendations

- The maintenance and re-establishment of boundary lines throughout the Unit will be scheduled as time and resources allow.
- An agreement for the continued use of the camplot on the south end of the Pleasant River needs to be completed.

SCATTERED PUBLIC LOTS

OSBORN, NORTH AND SOUTH LOTS

CHARACTER OF THE LANDBASE

The Osborn lots are Original Public Lots located in the central portion of the Town of Osborn in Hancock County. The north lot, also known as the Weaver Ridge lot, contains 640 acres. The south lot, known as the Tallyhookus lot, contains 320 acres.

The parcels are situated on low, heavily forested ridges surrounded by swamps, with the primary forest cover being mixedwood to hardwood. The slopes are moderate to gentle, with southerly aspects. The soils have many surface rocks and are poorly drained. The principle features on these properties include a small bog in middle of the north lot, and Johns Brook and associated small bog in the northeast corner of the south lot. No exemplary natural communities or rare plant species are known to occur on either property.

WILDLIFE RESOURCES

The parcels support populations of deer, ruffed grouse, and snowshoe hare. There are a number of sizable beech trees on the north parcel, probably frequented by bears when beech mast is available. Johns Brook, which flows into Spectacle Pond, supports a brook trout fishery. There is also an eagle's nest east of the south lot on Spectacle Pond.

RECREATION AND VISUAL RESOURCES

Hunting is the primary recreational activity, which is limited due to lack of road access. There are no recreation facilities or opportunities actively managed on these lots. The logging roads in the north lot receive some snowmobile use.

TIMBER RESOURCES

The two lots hold good quality spruce and hemlock, and fair to poor quality hardwoods, though the hardwoods are of better quality here than on other lands in the regional plan area. The land is mainly flat to gently rolling, with somewhat better soil quality than what is typical in this region. Timber inventories indicate 45% softwoods, 35% mixedwoods, and 20% hardwoods. About one half the hardwood inventory and a small part of the mixedwoods are relatively young (50-60 years) and of fire or clearcut origin. Most acres hold trees well over 100 years old.

The Osborn lots have a long history of timber management, with harvests taking place in the late 1960's to early 1970's, and again in the late 1980's to early 1990's. The parcels currently contain an even-aged spruce overstory with beech (very diseased with *Nectria* fungus) predominant in the understory. A timber management lease with the Town of Osborn expired in 1996. This lease, authorized by statute upon request by the Town, allowed the Town to manage timber on the lots under a plan reviewed and authorized by the Bureau. It was not known at the time the regional management plan was written as to the Town's future interests in renewing this lease.

Management Recommendations – All Resources

- Future timber agreements with the Town will need to include requirements that Forest Certification guidelines be met.

T24 MD

CHARACTER OF THE LANDBASE

The 330-acre parcel in T24 MD, located just north of the Great Heath in Washington County, is what remains of the original public lots on the township. Two similar-sized parcels (the minister and ministry lots) were part of a land trade in 1988, leaving the current “school lot” in public ownership.

The parcel is a relatively undisturbed natural area within a broad landscape of commercially managed and privately-owned blueberry barrens. A large portion of the lot consists of once-managed blueberry barren now in the process of reverting to forest. A lease granted to Cherryfield Foods for commercial use of the barrens expired in 1982, although they continue to maintain the graveled road through the property, which provides needed access to the abutting lands.

NATURAL AND GEOLOGICAL RESOURCES

The principle features on the property include a kettlehole pond/wetland complex between gravel “horsebacks.”

A total of 118 acres of wetlands are found on the parcel including two small bogs: a Sheep Laurel Dwarf Shrub Bog to the southwest and a Sedge Leatherleaf Fen Lawn to the north. The southwestern bog contains a small pond surrounded by a typical mix of dwarf shrub vegetation, including sheep laurel (*Kalmia angustifolia*), pale laurel (*Kalmia polifolia*), and Labrador-tea



(*Rhododendron groenlandicum*). The northern bog consists of a well-developed vegetation mat which grades into a less-mature bog near the pond dominated by tufted cotton-grass (*Eriophorum vaginatum*) and narrow-leaved cotton-grass (*Eriophorum angustifolium*). An abundance of beaver activity maintains the northern bog pond.

There are areas within the property that could benefit from occasional controlled burns.

The surrounding uplands are sparse barrens and Red Pine Woodlands, although the vegetation and structure of the community are young due to previous management practices. Young red pine dominates the canopy, with lowbush blueberry (*Vaccinium angustifolium*), sheep laurel, and bracken fern (*Pteridium aquilinum*) in the understory. The soil is sandy and shallow and underlain by glacial surficial deposits including an esker and a stagnation moraine. Acidic granite is the dominant bedrock type in the area. No rare plants or animals are known from this parcel, though upland sandpipers have been sighted nearby, and it is within the Barren Pond Brook watershed, which is protected for salmon.

WILDLIFE RESOURCES

The parcel adds important diversity to the landscape, and many animals likely use the area for shelter. As the forests on the parcel continue to mature, their value as wildlife habitat and ability to provide shelter will increase. In addition, wetlands on the parcel are remarkably diverse given

the parcel's small size. Mature peatlands, two small ponds, and wetlands associated with Mopang Stream contribute to habitat for wading birds and waterfowl. The barrens themselves are likely to provide habitat for some grassland birds of concern such as Upland Sandpiper.

The red pine stands is also likely habitat for the pine pinion moth (*Lithophane lepida*), found in northern hard pine stands. The moth is a species of Special Concern, requiring intact stands which it utilizes as a host.

RECREATION RESOURCES

Recreational opportunities include hunting, blueberry picking, and snowmobiling on the access road through the parcel. An ATV trail passes through the east side of the parcel from the Air Line (Route), part of the 700-mile ATV trail system. Although there are no trails maintained for non-motorized use, there are several short and relatively easy and pleasant walks from the access road to the wetland areas.

TIMBER RESOURCES

No timber harvest activities have occurred under Bureau management. The two bogs and associated wetlands on the property, coupled with poor timber growing potential of upland areas, mean only a small portion of the Bureau ownership could be productive timberland. The older forest (40 years, approx.) contains oak, and could be managed for mast production through crop tree thinnings. Much of the more recent barren-reversion has favored softwoods, often red and white pine. For the current planning interval no actions are needed.

Management Issues and Recommendations – All Resources

- The abutting landowner may have interest in the future leasing of the barrens for blueberry production. The Bureau, however, will continue to allow for the barrens to revert to woodland.
- Given the uniqueness and diversity represented by this property, it will remain in a relatively unmanaged state. Of particular importance will be the retention of any red pine stands, and its habitat importance to a rare species of moth.
- The existing recreational uses of the property for hunting and blueberry picking will continue; the use of the access roads for motorized trail use will continue, with no expansion of the trail system necessary.

NUMBER 14 TOWNSHIP, NORTH AND SOUTH LOTS

CHARACTER OF THE LANDBASE

There are two Original Public Lots in what is now Number 14 Township, located just north of the Rocky Lake Unit. The township deorganized as Plantation in 1986. The north lot contains 650 acres; the south lot 320 acres. The lots have been used primarily for winter timber harvesting. The principle features on the lots include Little Cathance Lake located on the north parcel, and Cathance Stream, which bisects both parcels.

NATURAL AND GEOLOGICAL, FISHERIES AND WILDLIFE RESOURCES

The terrain and forest cover on these lots resemble those on Rocky Lake, though the lots hold somewhat greater volume per acre. Cathance Stream is a major tributary to the Dennys River, one of the seven Atlantic salmon rivers in Maine, and contains a distinct population of Atlantic Salmon.

RECREATION RESOURCES

The area is used some for hunting and fishing, which constitutes most of the recreation activity on the two parcels.

TIMBER RESOURCES

The forest cover on both parcels is mostly mixed wood and softwood. Spruce budworm salvage operations took place in the mid 1980's, with the north lot and the east side of Cathance Stream on the south lot receiving the heaviest treatments. Careful adherence to Best Management Practices and riparian guidelines during forest harvesting activities are needed to protect water quality in this stream.

The south lot includes the second largest plantation undertaken by the Bureau, with more than 60 acres planted to spruce in 1984 following a budworm-salvage clearcut. The timber management issues are similar to the Rocky Lake Unit due to similarities in forest cover, and the presence of the salmon stream.

Management Issues and Recommendations – All Resources

- Management activities will need to address protection of water quality for Atlantic salmon purposes.

NUMBER 21 TOWNSHIP, NORTH AND SOUTH LOTS

CHARACTER OF THE LANDBASE

There are two Original Public Lots in Number 21 Township, accessed from the Stud Mill Road west of Princeton. The township deorganized as a Plantation in 1983. The north lot contains 600 acres; the south lot 350 acres. The principle features are the numerous bogs located on the north lot. The terrain and forest cover on both lots are similar to those found on the Rocky Lake Unit.

NATURAL AND GEOLOGICAL RESOURCES

In addition to the numerous bogs found on the north lot, a unique cedar stand of approximately 25 acres has been identified, and is considered a high quality natural community.

RECREATION RESOURCES

Recreational use of these lots has been limited mostly to hunting.

TIMBER RESOURCES

The forest cover is mostly mixedwood and softwood, and although similar to the Rocky Lake Unit, holds a greater proportion of cedar than any other property in the regional plan area. As cedar in this region is almost uniformly of poor quality, with the exception of the 25-acre stand previously mentioned, options for growing high value timber is limited, although good quality spruce and hemlock can be found.

ADMINISTRATIVE CONSIDERATIONS

A natural gas pipeline on the south lot, consisting of a 50 foot corridor along the Stud Mill Road, is leased to Maritimes and Northeast. The lease was issued for 25 years, and the pipeline installed in 1999.

A similar corridor for transmission lines was leased to Bangor Hydro Electric in 1990, with construction taking place until 2006 as part of the Northeast Reliability Interconnect project. This corridor also runs parallel to the Stud Mill Road, and was renegotiated in 2006 for a 25 year period. In accordance with the original lease, Bangor Hydro retains the option, with legislative approval, to acquire the corridor in fee.

V. Appendices

A. Resource Allocation Maps

B. Glossary

“Age Class”: the biological age of a stand of timber; in single-aged stands, age classes are generally separated by 10-year intervals.

“ATV Trails”: designated trails of varying length with a variety of trail surfaces and grades, designed primarily for the use of all-terrain vehicles.

“All-Terrain Vehicles”: motor driven, off-road recreational vehicles capable of cross-country travel on land, snow, ice, marsh, swampland, or other natural terrain. For the purposes of this document an all-terrain vehicle includes a multi-track, multi-wheel or low pressure tire vehicle; a motorcycle or related 2-wheel vehicle; and 3- or 4-wheel or belt-driven vehicles. It does not include an automobile or motor truck; a snowmobile; an airmobile; a construction or logging vehicle used in performance of its common functions; a farm vehicle used for farming purposes; or a vehicle used exclusively for emergency, military, law enforcement, or fire control purposes (Title 12, Chapter 715, Section 7851.2).

“Backcountry Ponds”: ponds having no existing road access by two-wheel drive motor vehicles during summer months within ½ mile of the normal high water mark of the body of water with no more than one noncommercial remote camp and its accessory structures within ½ mile of the normal high water mark of the body of water, that support cold water game fisheries and may offer outstanding foot trail, remote camping, and scenic vista opportunities.

“Backpack Hiking Trails”: designated foot trails of moderate to long length designed primarily for overnight foot traffic, with primitive campsites provided for overnight camping.

“Campgrounds”: areas designed for transient occupancy by camping in tents, camp trailers, travel trailers, motor homes, or similar facilities or vehicles designed for temporary shelter. Developed campgrounds usually provide toilet buildings, drinking water, picnic tables, and fireplaces, and may provide disposal areas for RVs, showers, boat access to water, walking trails, and swimming opportunities.

“Carry-In Boat Access”: dirt or gravel launch sites accessible by foot over a short to moderate length trail, that generally accommodates the use of only small watercraft. Includes a trailhead with parking and a designated trail to the access site.

“Clear-cut”: a single-age harvesting method in which all trees or all merchantable trees are removed from a site in a single operation.

“Commercial Forest Land”: the portion of the landbase that is both available and capable of producing at least 20 cubic feet of wood or fiber per acre per year.

“Commercial Harvest”: any harvest from which forest products are sold. By contrast, in a pre-commercial harvest, no products are sold, and it is designed principally to improve stand quality and conditions.

“Community”: an assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of recent human intervention

are minimal (“Natural Landscapes Of Maine: A Classification Of Ecosystems and Natural Communities” Maine Natural Heritage Program, April 1991).

“Compartment”: the basic inventory unit, a parcel of forest land, easily identifiable on the ground and generally ranging between 500 and 1,500 acres in size.

“Cross-Country Ski Trails”: designated winter-use trails primarily available for the activity of cross-country skiing. Trails may be short to long for day or overnight use.

“Cutting Cycle”: in uneven-aged management, the interval between harvest operations.

“Day Walking Trails”: designated foot trails of short to moderate length designed primarily for day use foot traffic.

“Demonstration Forest”: a forest in which management activities are designed to illustrate various facets of forest management; and/or to demonstrate exemplary multiple use techniques including but not limited to natural, scenic, wildlife, and educational values; and where information transfer through signs, brochures, and tours is provided.

“Ecological Reserve”: a parcel of land designated by the Bureau of Parks and Lands Director, containing certain “ecosystem types” (see below), and set aside primarily for non-manipulative scientific research and education purposes.

“Ecosystem Type”: a group of communities and their environment, occurring together over a particular portion of the landscape, and held together by some common physical or biotic feature. (“Natural Landscapes Of Maine: A Classification Of Ecosystems and Natural Communities.” Maine Natural Heritage Program, April 1991).

“Essential Habitat”: areas currently or historically providing physical or biological features essential to the conservation of an endangered or threatened species in Maine, and which may require special management considerations. Examples of areas that could qualify for designation are nest sites or important feeding areas. For some species, protection of these kinds of habitats is vital to preventing further decline or achieving recovery goals.

“Exotic (nonnative)”: a species that enters or is deliberately introduced into an ecosystem beyond its historic range, except through natural expansion, including organisms transferred from other countries into the state, unnaturally occurring hybrids, cultivars, genetically altered or engineered species or strains, or species or subspecies with nonnative genetic lineage.

“Forest Condition”: the state of the forest, including the age, size, height, species, and spatial arrangement of plants, and the functioning as an ecosystem of the combined plant and animal life of the forest.

“Forest Type”: a descriptive title for an area of forest growth based on similarities of species and size characteristics.

“Group Camping Areas”: vehicle or foot-accessible areas designated for overnight camping by large groups. These may include one or more privies, several fire rings or grills, a minimum of one water source, and several picnic tables.

“Group Picnic Area/Shelters”: areas designed to accommodate large groups that are generally separated from other nearby recreation facilities. These areas will usually include a large indoor charcoal grill and a large field area for game play. Outhouses may be shared with other users of the parcel.

“Horseback Ride/Pack Stock Trails”: generally moderate to long-distance trails designated for use by horses, other ride or pack stock.

“Improved Boat Access”: vehicle-accessible hard-surfaced launch sites with gravel or hard-surface parking areas. May also contain one or more picnic tables, an outhouse, and floats or docks.

“Interpretation”: an educational activity which aims to reveal meanings and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information.

“Interpretive Trails”: designated trails of short to moderate length designed to provide information regarding natural, historic, or cultural features, or wildlife. Information can be provided using a variety of methods ranging from self-guided trails with numbered posts corresponding to a booklet to those in which staff provide regularly scheduled guided programs.

“Invasive Species”: generally nonnative species that invade native ecosystems and successfully compete with and displace native species due to the absence of natural controls. Examples are purple loosestrife and the zebra mussel.

“Log Landings”: areas, generally close to haul roads, where forest products may be hauled to and stored prior to being trucked to markets.

“Management Roads”: roads designed for timber management and/or administrative use that may be used by the public as long as they remain in service. Management roads may be closed in areas containing special resources, where there are issues of public safety or environmental protection.

“Mature Tree”: a tree which has reached the age at which its height growth has significantly slowed or ceased, though its diameter growth may still be substantial. When its annual growth no longer exceeds its internal decay and/or crown loss (net growth is negative), the tree is over-mature.

“Non-mechanized”: a mode of travel across the landbase which does not utilize internal combustion, electric, or mechanically powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity.

“Motorized”: a mode of travel across the landbase which utilizes internal combustion or electric powered conveyances; which in itself constitutes a recreational activity, or facilitates participation in a recreational activity. This includes or assumes the use of mechanized forms of travel, such as a bicycle, for the same purpose.

“Mountain Bike Trails”: designated trails generally located on rough trail surfaces with moderate to steep grades, designed primarily for the use of mountain bicycles with all-terrain tires by individuals seeking a challenging experience.

“Multi-aged Management”: management which is designed to retain two or more age classes and canopy layers at all times. Its harvest methods imitate natural disturbance regimes, which cause partial stand replacement (shelterwood with reserves) or small gap disturbances (selection).

“Native”: any species present in an ecosystem within its historic range, or naturally expanded from its historic range.

“Natural Resource Values”: described in Maine’s Natural Resource Protection Act to include coastal sand dunes, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, great ponds and rivers, streams, and brooks. For the purposes of this plan they also include unique or unusual plant communities.

“Nontimber Management”: describes acres on which, due to administrative decision or site/terrain factors, either will not be cut or otherwise are unlikely to be cut. These acres will be excluded from sustainable harvest calculations.

“Old Growth Stand”: a stand in which the majority of the main crown canopy consists of long-lived or late successional species usually 150 to 200 years old or older, often with characteristics such as large snags, large downed woody material, and multiple age classes, and in which evidence of human-caused disturbance is absent or old and faint.

“Old Growth Tree”: for the purposes of this document, a tree which is in the latter stages of maturity or is over-mature.

“Original Public Lot”: That portion of the public landbase that constitutes “original reservations” held out from the sale of township blocks as surveyed in the 1800’s. These areas were at first held in common with others, most of which have now been delineated as separate lots.

“Pesticide”: a chemical agent or substance employed to kill or suppress pests (such as insects, weeds, fungi, rodents, nematodes, or other organism) or intended for use as a plant regulator, defoliant, or desiccant. (LURC Regulations, Ch. 10)

“Primary Forest”: forest areas having no discernible evidence of human-caused disturbance. Depending on where a particular primary forest is along its stand replacement sequence, it may or may not fit the definition of old growth.

“Primitive Campsites”: campsites that are rustic in nature, have one outhouse, and may include tent pads, Adirondack-type shelters, and rustic picnic tables. Campsites are generally accessed by vehicle, foot, or water.

“Primitive Picnic Areas”: trail or water access only areas that may contain one or more rustic picnic table, fire ring or outhouse.

“Public Road or Roadway”: any roadway which is owned, leased, or otherwise operated by a government body or public entity. (LURC Regulations, Ch. 10)

“Public Use Roads”: all-weather gravel or paved roads designed for two-way travel to facilitate both public and administrative access to recreation facilities; and includes parking facilities for the public. Management will include roadside aesthetic values normally associated with travel-influenced zones.

“Recreation Biking Trails”: designated trails of short to moderate length located on hard-packed or paved trail surfaces with slight to moderate grades, designed primarily for the use of groups or individuals seeking a more leisurely experience.

“Recreation Values”: the values associated with participation in outdoor recreation activities.

“Regeneration”: both the process of establishing new growth and the new growth itself, occurring naturally through seeding or sprouting, and artificially by planting seeds or seedlings.

“Regulated Forest Acreage”: that portion of the commercial forest landbase on which the sustainable harvest will be calculated at or near maximum sustainable levels.

“Release Cutting”: any cutting operation designed to remove competing vegetation from or establish proper spacing intervals among featured trees.

“Riparian”: an area of land or water that includes stream channels, lakes, floodplains and wetlands, and their adjacent upland ecosystems.

“Rotation”: the age at which stands of timber are harvested for particular economic or silvicultural objectives.

“Salvage”: a harvest operation designed to remove dead and dying timber in order to remove whatever value the stand may have before it becomes unmerchantable.

“Selection”: related to multi-aged management, the cutting of individual or small groups of trees; generally limited in area to patches of one acre or less.

“Semi-Regulated Forest Acreage”: describes acres on which, due to site, terrain or nontimber values, will yield commercial forest products at rates significantly lower than the maximum sustainable were timber the dominant use. These acres, which will have periodic but non-regular harvests, are to be distinguished from those on which commercial timber harvesting will be excluded.

“Service Roads”: summer or winter roads located to provide access to Bureau-owned lodging, maintenance structures, and utilities. Some service roads will be gated or plugged to prevent public access for safety, security, and other management objectives.

“Significant Habitat”: those habitats regulated by the Natural Resources Protection Act (NRPA) administered by the Maine Department of Environmental Protection. Essential habitats include freshwater wetlands, vernal pools, waterfowl and wading bird habitats, deer wintering areas.

“Silviculture”: the branch of forestry, which deals with the application of forest management principles to achieve specific objectives with respect to the production of forest products and services.

“Single-aged Management”: management which is designed to manage single age, single canopy layer stands. Its harvest methods imitate natural disturbance regimes, which result in full stand replacement. A simple two-step (seed cut/removal cut) shelterwood is an example of a single-aged system.

“Site Quality”: the combination of environmental factors and species' requirements, which serve to measure the degree of success with which a particular species of tree will occupy a given area of the forest.

“Snowmobile Trails”: designated winter-use trails of varying length located on a groomed trail surfaces with flat to moderate grades, designed primarily for the use of snowmobiles.

“Specialized Habitat”: habitat areas and features including rare natural communities, riparian areas, wetlands, mast-producing trees (beech and oak), grasslands, snags and den trees, large woody debris on the ground, raptor nesting trees, apple trees, and alpine slopes.

“Stand”: a group of trees, the characteristics of which are sufficiently alike to allow uniform classification.

“Sustainable Harvest”: that level of timber harvesting, expressed as treated acres and/or volume removals, which can be conducted on a perpetual basis while providing for nonforest values as expressed in this document. Ideally this harvest level would be “even-flow,” that is, the same quantity each year. In practice, the current condition of the different properties under Bureau timber management, and the ever-changing situation in markets, will dictate a somewhat cyclical harvest, which will approach even-flow only over time periods of a decade or more.

“Sustainable Harvest Unit”: a grouping of Bureau parcels with total area in the range of 10,000 to 50,000 acres, typically one or more consolidated units plus nearby smaller tracts, for which forest conditions are similar enough to make unified sustainable harvest calculations feasible.

“Unimproved Boat Access”: vehicle-accessible launch sites with dirt or gravel ramps to the water and parking areas, and where no other facilities are normally provided.

“Unregulated Forest Acreage”: describes acres on which, due to administrative decision or site/terrain factors will not be harvested, or are very unlikely to be harvested. These acres will be excluded from sustainable harvest calculations.

“Wide-area (Landscape)”: in the context used in this document, this is the large-scale view of the land, beyond forest stand or compartment level, taking in entire consolidated units or more, and including similarities and contrasts with conditions on abutting lands.

C. References

Maine Department of Conservation, Bureau of Parks and Lands Statutes; 12 MRSA Sections 1801-1899-C; May 1999 and as amended.

Maine Department of Conservation, Bureau of Parks and Lands, *Integrated Resource Policy for Public Reserved, Non-reserved Lands, State Parks, and State Historic Sites*; December 2000.

Maine Department of Conservation, Bureau of Parks and Lands, *Wildlife Guidelines for the Public Reserved Lands of Maine*; 1988 and as amended.

Maine Department of Conservation, Maine Natural Areas Program, *Ecological Reserve Monitoring Project*; April 2001.

Maine Department of Conservation, Maine Natural Areas Program, *Natural Resource Inventory of the Downeast Region (Regional Summary, Donnell Pond and Spring River Lake Units, Great Heath, Cutler Coast Unit, Rocky Lake Unit, Scattered Small Parcels)*; March 2004 - January 2005.

Maine Department of Conservation and the Maine Department of Inland Fisheries and Wildlife, *Strategic Plan for Providing Public Access to Maine Waters for Boating and Fishing*; March 1995.

Maine Department of Transportation, Hancock County Planning Commission, Washington County Council of Governments, *Blackwoods Byway, Route 182 Scenic Byway Corridor Management Plan*; June 2004.

Maine Department of Transportation, *Trail Management Plan and Proposal – Calais Branch Corridor*; February 2006

State of Maine, Office of the Governor, *Maine Woods Legacy*; November 2003.

Timber and Renewable Resources - source documents available:

- *Compartment Examination Manual*
- *Prescription Manual and prescriptions for the Downeast Region lands*
- *Timber Sale Manual*
- *Forest inventory data* *Forest Certification Reports - Sustainable Forestry Initiative (March 2002), Forest Stewardship Council (March 2002),*
- *Maine Bureau of Parks and Lands Forest Certification Manual*
- *Soil surveys*
- *Forest Laws of Maine*
- *Best Management Practices Manual*

D. Public Advisory Committee Members

Ashby Bladen,	Friends of Tunk
Rob Bryan,	Maine Audubon Society
John Bryant,	GMO (formally International Paper)
Bill Cherry,	Machias & East Machias River Watershed Council
Diano Circo,	Natural Resources Council of Maine
Rep. Robert H. Crosthwaite,	Ellsworth, District # 38
Garry Curtis,	Sportsman's Alliance of Maine
Gary Dowling,	Down East Trailriders Club
Judith C. East,	Washington County Council of Governments
Gary Edwards,	Down East Resource Conservation and Development
Jim Fisher,	Hancock County Planning Commission
Sterling Fitzhenry,	East Stream ATV Riders
Sally Jacobs,	Downeast Sunrise Trail Coalition
David MacDonald,	Maine Coast Heritage Trust
Andrew M. Pierce,	Landowner, T10 SD
Nancy Sferra,	The Nature Conservancy
Dwayne Shaw,	Downeast Salmon Federation
Joey Smith,	Donnell Pond Campowners Association

Staff to the Committee

Greg Burr,	Fisheries Biologist, Inland Fisheries and Wildlife
Rich Bard,	Wildlife Biologist, Inland Fisheries and Wildlife
Tom Charles,	Silviculturalist, Bureau of Parks and Lands
Jeff Currier,	Forest Ranger, Maine Forest Service
Andy Cutko,	Former Ecologist, Maine Natural Areas Program
Gena Denis,	GIS Coordinator, Bureau of Parks and Lands
Tom Desjardin,	Historic Site Specialist, Bureau of Parks and Lands
Jim Frohn,	Forester, Bureau of Parks and Lands
Ralph Knoll,	Former Deputy Director, Bureau of Parks and Lands
Vern Labbe,	Former Eastern Lands Manager, Bureau of Parks and Lands
George Powell,	Boating Facilities Director, Bureau of Parks and Lands
Scott Ramsey,	Off-Road Vehicle Supervisor, Bureau of Parks and Lands
Stephen Richardson,	Forest Engineer, Bureau of Parks and Lands
Chuck Simpson,	Eastern Lands Manager, Bureau of Parks and Lands
Dave Soucy,	Director, Bureau of Parks and Lands
John Titus,	Senior Planner, Bureau of Parks and Lands
Joe Wiley,	Wildlife Biologist, Bureau of Parks and Lands
Brooke Wilkerson,	Ecologist, Maine Natural Areas Program

E. Technical Appendices – Timber and Renewable Resources

DOWNEAST TIMBER – The Three Unit Areas: DATA OUTLINE

Composition by Acreage

Note: Osborn was inventoried as part of the DUCK parent unit, and its acres are listed separately. Unit acres for Cutler, Rocky, and Donnell include only size classes 2 and 3, those included in the 1999 inventory. Size class one (seedling/sapling) acres, which were not inventoried, are shown only for the Plan area as a whole.

Tract	Cutler	Rocky	Donnell	Osborn	Size Class 1		Plan Area
Forest Acres	5,320	8,659	6,539	907	2,063		23,488
Timber Type							
Softwood	30%	32%	31%	46%	28%		31%
Mixedwood	66%	58%	35%	35%	49%		52%
Hardwood	4%	10%	34%	19%	23%		17%

Stocking by Volume – Inventoried Acres, plus Estimated for Size Class 1

Note: Osborn was inventoried as part of the DUCK Parent Unit, which it closely resembles, and its volumes shown are those of the DUCK P.U. The non-inventoried size class one holds an estimated five cords per acre in scattered overstory trees.

Tract	Cutler	Rocky	Donnell	Osborn	Size Class 1	Plan Area	Inv. Ac. Only
Forest Acres	5,320	8,659	6,539	907	2,063	23,488	21,425
Avg. Cd/ac	15.0 cd/ac	16.7 cd/ac	18.4 cd/ac	22.9 cd/ac	5.0 cd/ac	16.03 cd/ac	17.10 cd/ac
Softwood	17.2	16.8	21.9	28.3	5	18.03	19.13
Mixedwood	14.0	16.3	20.3	18.0	5	15.48	16.45
Hardwood	15.1	19.0	13.5	17.2	5	13.98	15.18

Composition by Volume – Top Ten Species (black/red/white “spruce” taken as one species)

Rank	CUTLER	ROCKY	DONNELL	THREE UNITS
1	Spruce 34%	Spruce 24%	Spruce 31%	Spruce 29%
2	Fir 26%	Red maple 24%	Red maple 14%	Red maple 17%
3	White birch 13%	Cedar 17%	White pine 11%	Cedar 11%
4	Red maple 11%	Hemlock 6%	Red oak 7%	Fir 10%
5	Cedar 7%	White pine 6%	Hemlock 6%	White birch 7%
6	Yellow birch 5%	Fir 5%	White birch 5%	White pine 6%
7	Tamarack 3%	White birch 5%	Beech 5%	Hemlock 5%
8	Aspen 1%	Aspen 4%	Cedar 5%	Yellow birch 4%
9	-	Yellow birch 4%	Fir 4%	Aspen 3%
10	-	Beech 2%	Aspen 3%	Red oak 3%
Avg. DBH	7.91”	8.95”	8.50”	

Recent (1985 onward) Harvesting – No 1985-on harvests by BP&L on Cutler, Twp 14, Twp 21.

Osborn	1988-91: 728 ac., 8,758 cd.	1995: 21 ac., 168 cd.	
Rocky	1988-91: 479 ac., 8,888 cd.	1994: 78 ac., 637 cd.	2003-04: 513 ac., 4,683 cd.
Donnell		2000: 12 ac., 361 cd.	2004: 130 ac., 1,064 cd.

Plan Area:	1988-91: 1,207 ac., 17,646 cd.
	1994-95: 99 ac., 805 cd.
	2000: 12 ac., 361 cd. (Dynamite Brook Road R-O-W)
	2003-04: 643 ac., 5,747 cd. (2004 through Sept. 30)

Total, 1985 on: 1,961 ac., 24,559 cd. (Volume per year, 1,228 cd., is 16% of maximum sustainable harvest of 7,557 cd/yr)